

### **REMARKS**

Claims 24-35 and 38-46 remain pending and under examination. Applicants have amended claims 24 and 40. Support for the amendments may be found in the specification at, for example, page 17, line 26 to page 18, line 23, and Fig. 2.

Applicants respectfully traverse the rejections made in the Final Office Action, wherein the Examiner:

(1) rejected claims 24-26, 40, 45, and 46 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,556,659 ("*Bowman*") in view of U.S. Patent No. 6,324,184 ("*Hou*");

(2) rejected claims 27-30, 38, and 39 under 35 U.S.C. § 103(a) as being unpatentable over *Bowman* in view of *Hou*, and further in view of U.S. Patent Application Pub. No. 2003/0126256 ("*Cruickshank*");

(3) rejected claims 41-44 under 35 U.S.C. § 103(a) as being unpatentable over *Bowman* in view of *Hou*, and further in view of U.S. Patent No. 7,142,512 ("*Kobayashi*"); and

(4) rejected claims 31-35 under 35 U.S.C. § 103(a) as being unpatentable over *Bowman* in view of *Hou* and *Cruickshank*, and further in view of *Kobayashi*.

#### **Rejection of Claims 24-26, 40, 45, and 46 under 35 U.S.C. § 103(a):**

Applicants request reconsideration and withdrawal of the rejection of claims 24-26, 40, 45, and 46 under 35 U.S.C. § 103(a) as being unpatentable over *Bowman* in view of *Hou*.

*Bowman* and *Hou*, taken either alone or in combination, do not teach or suggest at least

Applicants' claimed:



processing said static and dynamic network information to obtain at least:

a geometric saturation index indicative of a degree of use of said cables, wherein the geometric saturation index is based on a ratio of a quantity of cable pairs which support said broadband transmissive systems in at least a portion of the access network and a quantity of total available cables in said portion of the access network; and

a transmissive saturation index indicative of a transmissive status of said cables in terms of a bit rate of said broadband transmissive systems supported by said cables,

as recited in amended claim 24 (and similarly in amended claim 40, emphases added).

The Final Office Action acknowledged that *Bowman* does not expressly disclose obtaining both indices. *See* Final Office Action, page 4. However, the Final Office Action then alleged that *Hou* teaches such elements. *See* Final Office Action, pages 4-6. Applicants respectfully disagree.

*Hou* does not cure the deficiencies of *Bowman*. For example, *Hou* discloses a method for adaptively allocating bandwidth in an upstream channel of, for example, a hybrid fiber coaxial network. *See Hou*, Abstract and col. 1, lines 11-14. In *Hou*'s method, a ratio  $K=C(i)/B(i)$  is computed "for each *i*th user on the *j*th channel," where "C(*i*) is the traffic count of the current user over a control interval, and B(*i*) is number of assigned slots over the control interval." *Hou*, col. 9, lines 47-51 (emphases added). The Final Office Action alleged that the ratio K constitutes Applicants' claimed "geometric saturation index." *See* Final Office Action, page 5. This allegation is incorrect.

The ratio K disclosed by *Hou* cannot constitute Applicants' claimed "geometric saturation index" at least because this ratio corresponds to a bandwidth. This is clear from *Hou*'s definition of K, B(*i*), and C(*i*). For example, *Hou* discloses that "C(*i*) is the number of slots that the current user actually used to transmit data upstream over the control interval . . . ." *Hou*,



col. 9, lines 51-53 (emphasis added). *Hou* further discloses that “B(i) is the number of slots which the MAC management entity has assigned to the user for the control interval.” *Hou*, col. 9, lines 54-56 (emphasis added). *Hou* then discloses that “the size and number of the slots corresponds to a bandwidth, so that C(i) corresponds to a bandwidth which is consumed by the user, and B(i) corresponds to a bandwidth which is allocated (e.g., assigned) to the user.” *Hou*, col. 9, lines 56-60 (emphases added). A person of ordinary skill in the art would know that a bandwidth is a measure of data transfer rate. Therefore, the ratio K disclosed by *Hou* corresponds to a ratio in terms of bandwidth (e.g., data transfer rate), which cannot constitute Applicants’ claimed “geometric saturation index indicative of a degree of use of said cables, wherein the geometric saturation index is based on a ratio of a quantity of cable pairs which support said broadband transmissive systems in at least a portion of the access network and a quantity of total available cables in said portion of the access network,” as recited in amended claim 24 (and similarly in amended claim 40, emphases added).

Moreover, the ratio K disclosed by *Hou* is with respect to a single user in a single channel (see *Hou*, col. 9, lines 47-48: “for each ith user on the jth channel, a ratio  $K=C(i)/B(i)$  is computed . . .” (emphases added)). Thus, the ratio K such compute cannot indicate “a degree of use of [ ] cables,” as recited in claim 24 (emphasis added). And the ratio K is clearly not “based on a ratio of a quantity of cable pairs .... and a quantity of total available cables ....,” as recited in claim 24 (emphases added).

Therefore, *Bowman* and *Hou*, taken either alone or in combination, fail to teach or suggest at least the above-quoted recitations of Applicants’ claim 24. Independent claim 24 should therefore be allowable over *Bowman* and *Hou*. Independent claim 40, while of different scope, contains recitations similar to those of claim 24, and therefore be also allowable for at least the same reasons as independent claim 24. In addition, dependent claims 25, 26, 45, and 46



should be allowable at least by virtue of their respective dependence from independent claim 24 or 40, and because they recite additional features not taught or suggested by the cited references. Accordingly, Applicants respectfully request withdrawal of the 35 U.S.C. § 103(a) rejection.

**Remaining Rejections under 35 U.S.C. § 103(a):**

Applicants request reconsideration and withdrawn of the remaining rejections of claims 27-35, 38, 39, and 41-44 under 35 U.S.C. § 103(a) as being unpatentable over *Bowman* and *Hou*, and further in view of one or more of *Cruickshank* and *Kobayashi*. As discussed above, *Bowman* and *Hou*, taken either alone or in combination, fail to render obvious at least Applicants' independent claim 24.

In addition, as presented in the Amendment filed on September 18, 2009, *Cruickshank* and *Kobayashi* both fail to cure the deficiencies of *Bowman*. For similar reasons, Applicants submit that *Cruickshank* and *Kobayashi* also fail to cure the deficiencies of *Bowman* and *Hou*. That is, *Cruickshank*, merely disclosing a network performance values based on network impact and network topology (which includes location of nodes, network elements, and high-frequency coax (HFC) node combining plans) (*see Cruickshank*, para. [0022] and [0029]), and *Kobayashi*, merely disclosing a network measurement controlling system comprising a meter which receives packets from a network and measures the number of packets (*see Kobayashi*, Abstract), both fail to teach or suggest Applicants' claimed

processing said static and dynamic network information to obtain  
at least:

a geometric saturation index indicative of a degree of use of  
said cables, wherein the geometric saturation index  
is based on a ratio of a quantity of cable pairs which  
support said broadband transmissive systems in at  
least a portion of the access network and a quantity  
of total available cables in said portion of the access  
network; and



a transmissive saturation index indicative of a transmissive status of said cables in terms of a bit rate of said broadband transmissive systems supported by said cables,

as recited in amended claim 24 (and similarly in amended claim 40, emphases added).

Independent claim 24 is not obvious over *Bowman*, *Hou*, *Cruickshank*, and *Kobayashi*, whether these references are taken alone or in any combination. Independent claim 40, while of different scope, contains recitations similar to independent claim 24, and should also be allowable for at least the same reasons as independent claim 24. Therefore, dependent claims 27-35, 38, 39, and 41-44 should also be allowable at least by virtue of their respective dependence from base claim 24 or 40, and because they recite additional features not taught or suggested by the cited references. Accordingly, Applicants respectfully request withdrawal of the remaining 35 U.S.C. § 103(a) rejections.

**Conclusion:**

Applicants request reconsideration of the application and withdrawal of the rejections. Pending claims 24-35 and 38-46 are in condition for allowance, and Applicants request a favorable action.

The Final Office Action contains a number of statements reflecting characterizations of the related claims. Regardless of whether any such statements are identified herein, Applicants decline to automatically subscribe to any such statements or characterizations in the Final Office Action.

If there are any remaining issues or misunderstandings, Applicants request the Examiner telephone the undersigned representative to discuss them.

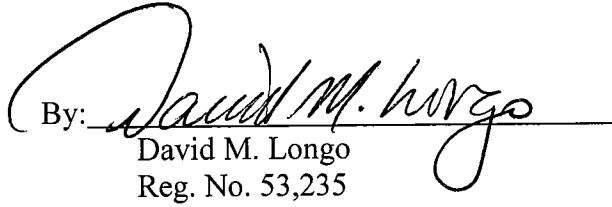


Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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